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- Thank you, Mark [Dr. Mark Lewis] for that gracious introduction and for the opportunity to talk with you about some of the many exciting things that are happening at NASA.
- This is my first public speaking opportunity since last week's historic landing of the *Curiosity* rover on the surface of Mars – so I can't help but begin by sharing our excitement about this success and what it means going forward.
- I hope you all got a chance to see this historic achievement and are following the steady flow of stunning pictures on NASA.gov.

- As you may know, *Curiosity* is the most sophisticated rover ever built and sent to another planet. For the next two years, it will seek to answer ago-old questions about whether life ever existed on Mars – or if the planet can sustain life in the future.
- The landing, which was dubbed “Seven Minutes of Terror,” was the most difficult and challenging mission in the history of robotic planetary exploration.
- New technologies previously unused or proven were created for this journey.
- Quite frankly, we did not know if we would make it, but we went for the gold and scored a perfect 10.
- This was an amazing achievement, made possible by a team of scientists and engineers from around the world and led by the extraordinary men and women of NASA and our Jet Propulsion Lab in Pasadena, California.

- I know that this group is very interested in the cost-benefit analysis of the nation's investment in science and technology.
- So I want you to know that the \$2.5 billion investment in the *Curiosity* mission was not spent on Mars, but here on Earth, mostly in the United States. More than 7,000 people have worked on this mission in some capacity in at least 31 states. The mission also includes contributions from Spain, France, Canada, Russia, the UK, and Germany.
- President Obama put it in the larger context of America's economic and technological leadership. Commenting on the *Curiosity* mission, he said, "Tonight's success reminds us that our preeminence -- not just in space, but here on Earth -
- depends on continuing to invest wisely in the innovation, technology, and basic research that has always made our economy the envy of the world."

- The President understands, as do we all, that science and technology has always been the engine of American progress and he's backed that commitment up with substantial investments in his budget.
- Even in these tough economic times, his budget for next year proposes \$140.8 billion for Research and Development – an increase of \$2.0 billion or 1.4 percent over 2012 funding.
- He has proposed \$17.7 billion for NASA – a stable budget that keeps us on track to implement the space exploration program agreed to by the President and a bipartisan majority in Congress. It is a budget that allows us to support a diverse portfolio of human exploration, technology development, science, aeronautics, and education work.

- Over the last four years, the Obama Administration has proposed a record four-year investment of more than \$74 billion in NASA to maintain America's leadership in space and spur scientific and technical discovery here on Earth.
- I could spend the rest of the day talking about the many exciting things that are happening at NASA, but in the interest of time, I will focus on only three: The milestone progress we are making in our commercial crew efforts; the recent arrival of the *Orion* space capsule at Kennedy Space Center; and the ongoing activity on the International Space Station.
- With all the excitement about the *Curiosity* landing, you may have missed the other big news of last week.

- On Friday, August 3rd, I was at Kennedy Space Center to announce the selection of three companies for the next phase of our efforts to develop private sector capabilities that will keep us on track to end the outsourcing of America's human spaceflight program.
- We selected these companies to develop crew transportation capabilities as fully integrated systems.
- They are: The Boeing Company, Space Exploration Technologies and Sierra Nevada Corporation.
- Each of these companies has proven track records in the aerospace industry.
- By keeping three companies in the mix, we not only ensure competition, which is good for the taxpayers, we also guarantee that we never find ourselves in the situation we're in today -- dependent on a sole provider to get our crews to space.

- For the next 21 months, these partners will perform tests and complete designs.
- Through this initiative NASA will help the private sector design and develop the human spaceflight capability that could ultimately lead to the availability of human spaceflight services for both government and commercial customers.
- We'll also help support the creation of high-paying technology jobs across the country.
- The ultimate goal of our Commercial Crew space program -- a high priority of the Obama Administration -- is to bring human spaceflight launches back here to American soil and end the outsourcing of these important jobs.
- By 2017, we are planning to rely on American companies for safe, reliable and cost-effective crew transportation and rescue services for low-Earth orbit activities.

- This will allow NASA to concentrate on building America's next generation space exploration system, the *Orion* spacecraft, and the Space Launch System -- the vehicle and rocket that will take American astronauts farther into space than any spacecraft developed for human spaceflight has flown in the 40 years since our astronauts returned from the moon. And yes, that means sending humans to Mars by the mid 2030s.
- This dual-track exploration strategy is working. In May, SpaceX became the first private company to launch to the International Space Station, berth to the Station, and recover the *Dragon* capsule after a water landing – with cargo intact.
- Later this year, Orbital Sciences Corporation, another commercial entity is planning to conduct its first demonstration mission of a similar cargo resupply capability.
- Again, this is allowing NASA to do what we do best – explore even deeper into the heavens.

- To that end, on July 2nd, which also marked the 50th anniversary of the Kennedy Space Center, Deputy Administrator Lori Garver was at Kennedy Space Center, along with Senator Bill Nelson, Center Director Bob Cabana, and officials from Lockheed Martin for the unveiling of the agency's first space-bound *Orion* spacecraft. *Orion* is now undergoing final construction and integration at Kennedy in preparation for its first test flight in 2014.
- In 2017, NASA's Space Launch System (SLS), a heavy-lift rocket that will provide an entirely new capability for human exploration beyond low Earth orbit, will launch *Orion*.
- The economic benefit of our enhanced public-private partnerships is one of the reasons this will be a key component of our future. As I have said many times, every dollar we spend on space exploration is spent right here on Earth.

- Building a strong commercial space industry represents good jobs and innovation and pushes the envelope of our capabilities.
- Finally, I want to say a word about the International Space Station, arguably one of the greatest technological achievements in human history.
- The ISS represents our toehold to the rest of the solar system. What we learn there is going to make it possible for us to venture farther. It will help us become a truly space-faring people.
- On July 17th, a Soyuz space capsule safely transported three new astronauts to the International Space Station as part of Expedition 32.

- NASA flight engineer, Sunita Williams; Russian Soyuz commander, Yuri Malenchenko; and Japan Aerospace Exploration Agency flight engineer, Akihiko Hoshide joined Expedition 32 commander, Gennadiy Padalka and flight engineers Joe Acaba and Sergei Revin who have been aboard the orbiting laboratory since May 17.
- We have had people continuously on-orbit each and every day for more than 11 years now. Just the thought of this would have been science fiction when I was a child.
- Not only is the ISS the largest, most complex international scientific and engineering program in history, it is a test bed for future technologies and systems and is a tangible symbol of unprecedented international cooperation.
- The International Space Station is also a world-class laboratory in which full-time research is conducted.

- More than 400 scientific studies were conducted on ISS last year in an array of disciplines, not just those related to human health. There are probably 5-10 investigations going on any given day.
- These studies are proving helpful with everyday problems of people of all ages here on Earth and are also applicable to astronauts on long space voyages. We're learning a lot about the human immune system, inner ear response and balance, visual acuity changes, and bone density loss, for example.
- Now that its construction is completed, we expect many more partnerships in the future with academia, industry, other U.S. agencies, and other countries, to help bring it to its full potential and fully utilize this incredible investment.

- Before I take questions, I want to say a word about the recent passing of two icons of our space community.
- Retired United States Air Force Lt. General and former Kennedy Space Center Director, Forrest S. McCartney died on Tuesday, July 17th. In the 50-year history of Kennedy Space Center there have been only 10 directors. Forrest McCartney was one of the finest. He was appointed KSC director in 1987, only months after the Challenger disaster. His leadership resulted in the Shuttle's return-to-flight and he oversaw more than a dozen flawless Shuttle launches during his five-year tenure. His service to his country and to Kennedy earned him Distinguished Service Medals from both the Air Force and NASA.
- Forrest McCartney was an engineer, a patriot and a true leader who was universally praised by the people who worked for him and with him.

- On July 23rd, we lost Astronaut Sally Ride, America's first woman to fly to space. As the youngest American to make a space flight when she flew as a member of the STS-7 crew in 1983, she was a true trailblazer. She was an educator, pioneer, and explorer. By the time Sally decided to apply to become an astronaut after reading an ad on page 3 of the Stanford student newspaper, she had already received degrees in physics and English and was on her way to a Ph.D. in physics from Stanford University. She went back into space in October of 1984 and was assigned to another mission after that, but it was scrapped after the shuttle Challenger disaster in 1986. Sally served on the presidential commissions investigating both the Challenger and Columbia accidents.
- After a stint as a professor of physics at the University of California, San Diego, she founded Sally Ride Science.

- As NASA puts it, the company allowed her to "pursue her long-time passion of motivating girls and young women to pursue careers in science, math and technology."
- The legacies of these two icons remind us that we can develop all the technology we want, but in the final analysis, all of this is about people.
- It's about making life better here on Earth; about improving the human condition; expanding our knowledge; and expanding our partnerships across Earth in pursuit of a larger goal that none of us could accomplish on our own.
- I ask you to remember that as you celebrate the lives and service of Forrest S. McCartney and Sally K. Ride.